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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,379	02/25/2004	Hyung-Joon Kim	YOU102	3388

7590 11/23/2005
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EXAMINER

CAMERON, ERMA C

ART UNIT PAPER NUMBER

1762

DATE MAILED: 11/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/786,379

Applicant(s)

KIM ET AL.

Examiner

Erma Cameron

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 15 and 16 have been canceled and claims 11-12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on October 24, 2005.

However. Claims 11 and 12 have been rejoined into the application.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1- 14 and 17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

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a) The definition of alkane is a saturated acyclic hydrocarbon (see attached page 5 from IUPAC Nomenclature of Organic Chemistry, Sections A, B, C, D, E, F and H). It is therefore confusing how R groups could have carboxyl and other functional groups, as opposed to hydrocarbon groups, and the molecule be referred to as an alkane.

b) Example 4, 11:25 – what is VS?

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 4, 6-8 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) Claim 4, line 2: it is not clear if “hot rolled and pickled steel sheet” is one species or two.

b) Claim 4, line 4: it is not clear why aluminum sheets and aluminum alloy sheets have been joined by “and” in a Markush group.

c) Claim 4: it is not clear why gold requires corrosion protection.

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d) Claim 6: it is not clear which step in claim 1 is considered the coating step, and therefore it is not clear what is meant by “prior”.

e) Claim 7: ethyl acetate and butyl acetate should be broken out as two separate species, for clarity.

f) Claim 8: “preferred” is indefinite in that the limitations of the claim are not clear.

g) Claim 17: there is no antecedent basis for “the treated surface”.

Claim Objections

6. Claims 1 and 13 are objected to because of the following informalities: “it” lacks proper antecedent basis, although a reading of the claims makes it clear that metal is the antecedent of “it”.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-6 and 13 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by JP 10-001786.

'786 teaches coating galvanized steel sheets with 1-octadecanethiol (RN 2885-00-9) or other mercaptides for corrosion protection. The sheets do not need chromating. See Abstracts.

9. Claims 1-4, 7-8 and 10-11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by JP 57-198269.

'269 teaches coating by dipping (i.e. immersion) a silver-plated stainless steel into a octadecylmercaptan solution (RN 2885-00-9) in ethanol or other organic solvents for corrosion protection (see Abstracts).

10. Claims 1-2, 4 and 7-11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Scherer et al (Langmuir 13, pp 7045-7051, 1997).

Scherer teaches coating copper for corrosion protection by immersion in a solution of 1-octanethiol or 1-hexadecanethiol in ethanol at 1mM conc (pp 7045-7046).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10-001786.

'786 is applied here for the reasons given above.

'786 does not teach that the galvanized steel was produced by electrogalvanizing, but galvanizing in general is inclusive of electrogalvanizing.

'786 does not teach that the steel is phosphated, but phosphating steel is conventional, and it would have been obvious to one of ordinary skill in the art to have added phosphating to the steel treatment because of its known advantages.

'786 does not teach that the steel becomes fingerprint free, but that property would be inherent to the 1-octadecanethiol coating.

13. Claims 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 57-198269.

'269 is applied here for the reasons given above.

'269 does not teach the immersion time.

It would have been obvious to one of ordinary skill in the art to have optimized the immersion time through no more than routine experimentation because immersion time is known to be an important parameter to control in a coating process.

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'269 teaches that the thiol cpd is at 0.01-5%, which overlaps with applicant's claimed range of 1-500 mMolar.

14. Claims 3 and 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Scherer et al (Langmuir 13, pp 7045-7051, 1997).

Scherer is applied here for the reasons given above.

Scherer does not teach the immersion time.

It would have been obvious to one of ordinary skill in the art to have optimized the immersion time through no more than routine experimentation because immersion time is known to be an important parameter to control in a coating process.

Scherer does not teach 1-octadecanethiol.

Scherer teaches 1-hexadecanethiol.

1-hexadecanethiol is a homolog of 1-octadecanethiol, and similar results would be expected from each.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erma Cameron whose telephone number is 571-272-1416. The examiner can normally be reached on 8:30-6:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ERMA CAMERON
PRIMARY EXAMINER

Erma Cameron
Primary Examiner
Art Unit 1762

November 17, 2005